

*Democracy Dies in Darkness*

# YEAR OF LOBBYING TURNED 'BRILLIANT PEBBLES' INTO TOP SDI PLAN

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By R. Jeffrey Smith

A plan to orbit roughly 10,000 small missile interceptors in space has emerged as the top priority in President Bush's Strategic Defense Initiative (SDI) research program after a year-long lobbying effort by its creators at a nuclear weapons laboratory, administration officials said. The weapons, dubbed "brilliant pebbles" by advocates, were first described to Bush last summer in a White House briefing by Edward Teller, a former director of the Lawrence Livermore National Laboratory, and Lowell Wood, director of advanced studies there. Six years ago, the same physicists helped persuade then-President Ronald Reagan to launch the SDI program by outlining dramatic progress in the laboratory's development of lasers powered by nuclear explosives for space warfare, assertions that other government scientists said were misleading and exaggerated. Teller and Wood "briefed everyone who would listen" at the White House about their new scheme before Bush's decision to reorient the program last week, a senior official said, and also have helped SDI officials brief dozens of congressional staff members and top officials at other agencies. Vice President Quayle, an early enthusiast about the idea, hinted at the direction of the administration's deliberations in a speech last month, asserting that the concept "could revolutionize much of our thinking about strategic defense." Defense Secretary Richard B. Cheney confirmed in a Sunday television appearance that Bush had decided the SDI program's "emphasis will be on . . . testing that concept over the course of the next year or two to see if we can in fact go that route." Cheney, who also announced cuts of \$1 billion in the proposed SDI budget for fiscal year 1990 and an estimated \$6 billion in later years, added that he hoped the idea "can save a lot of money." In congressional testimony yesterday, he said that if studies show that brilliant pebbles will not work, the program would retreat to a more elaborate space-based defense that was SDI's top priority last year. Advocates of brilliant pebbles, such as former SDI director Lt. Gen. James A. Abrahamson, have said that a limited, space-based missile defense incorporating the three-foot-long rockets could be deployed beginning in 1994 at a cost of about \$25 billion, roughly a third of the estimated cost of the more elaborate space-weapons plan. But some independent experts maintain that these estimates are optimistic. "I do not know of anything that makes that realistic," said Stanford physicist Sidney Drell, a critic of Bush's new SDI spending plan. "It's an extravagant claim that should be looked at with a lot of caution, because there's a great distance between a concept and an engineered, military system." Matthew Bunn, a senior research analyst at the Arms Control Association, said, "There is no way Bush can restrain the military budget and get an agreement reducing strategic arms without ultimately abandoning the brilliant-pebbles plan." The officials said Bush chose the idea from a range of alternatives that included continued emphasis on last year's more elaborate space-weapons plan, aggressive development of a ground-based defense against Soviet missile attack and a limited program of general research, the officials said. The Joint Chiefs of Staff favored the research option because it cost less than others and because they oppose near-term abrogation of the 1972 Antiballistic Missile Treaty, which bars space-based missile defenses, Pentagon officials said. But Bush and his advisers ultimately decided not to incur the wrath of the program's supporters by dramatically scaling back its goals while simultaneously slashing its budget, other officials said. Bush's choice came just as the Defense Science Board began a formal study to determine whether the idea has merit. The board's report is expected late this summer. The name of the proposed weapons is derived from the term "smart rocks," a military catch phrase for simple, computer-controlled rockets that scientists have predicted will eventually be developed for tactical warfare. Wood is said to have coined the term brilliant pebbles in an effort to dramatize his claim that the space-based weapons would be even smaller and contain better computers than smart rocks. Wood's research group has been working to develop small supercomputers, just a few inches in diameter, for nearly a decade. His idea is to package one with a state-of-the-art optical camera, a miniature guidance system and an efficient rocket motor to yield an interceptor weighing less than 100 pounds. "You may have seen Lowell Wood, who is responsible for this program, running around town with {a mockup} . . . on a little cart," said Charles J. Infosino, deputy director of the SDI architecture and analysis office, in a recent briefing for reporters and congressional staff members. But construction of a working prototype is said to be at least several years away. The rocket's goal, like that of all the space-based weapons imagined so far by SDI researchers, would be to find and hit a Soviet ballistic missile traveling at a speed of more than four miles a second, from a distance of 2,000 miles or so, within a matter of minutes. Experts privy to Wood's calculations say his estimates of the number required, their altitude in space and their cost have changed since he introduced the concept last year. Official cost estimates for each rocket are now said to be \$500,000 to \$1.5 million, in contrast to Wood's estimates of \$100,000 a year ago. Wood said

construction of such a lightweight weapon is practical because routine electrical power and orbital guidance would be supplied by equipment in a separate module to be jettisoned when the rockets fire. Upon by a command from Earth, relayed by satellites or passed from one interceptor to another, the rockets would independently attack whatever appeared, from the heat and light of its flame, such as a nearby Soviet missile rising through clouds. One government scientist, who asked not to be identified, noted that the interceptor's "focal plane array" sensors, which detect and track the swiftly moving missiles, cost several million dollars each and expressed skepticism that mass production can shrink their size and reduce the price by at least a factor of 10, as Wood has estimated. "This is likely to be a show stopper, because he can't do it without much more expensive, specialized arrays," the official said. Livermore physicist Ray Kidder, an SDI skeptic, suggests that the Soviets could defeat the plan by building missiles that leap into space more quickly, extinguishing their bright flames long before the brilliant pebbles can home in for the kill. Soviet Maj. Gen. Boris Surikov, in a recent article distributed by the official press agency Novosti, predicted just this move "in order to counter SDI." Rep. Charles E. Bennett (Fla.), a chairman of the House Democratic Task Force on SDI, said, "You've got to realize where this comes from. These are the same people who told President Reagan they could build something the size of an office desk that could knock down all ICBMs." Bennett was referring to promises by Teller and Wood in the early 1980s about how quickly the nuclear explosion-powered, X-ray laser would be developed and how powerful it would be. The claims prompted Livermore's senior weapons development official to resign in protest. THE INTERCEPTOR "Brilliant pebbles" is the name of the rocket system designed to destroy Soviet ballistic missiles before they reach U.S. territory. Thousands of interceptors like the one shown here would be placed in space to protect the United States. The interceptor measures about three feet long and weighs about 100 pounds. SOURCE: Department of Defense model

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